RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: 10/069,427-A
Source: EFW16
Date Processed by STIC: 2-1-05

ENTERED

IFW16

RAW SEQUENCE LISTING DATE: 02/01/2005
PATENT APPLICATION: **US/10/069,427A** TIME: 11:33:38

Input Set : **A:\Sequence Listing US10069427.txt**
Output Set: **N:\CRF4\02012005\J069427A.raw**

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      3 <110> APPLICANT: Famodu, Omolayo O.
      4       Kinney, Anthony J.
      7 <120> TITLE OF INVENTION: Genes Encoding Sterol Delta-14 Reductase in Plants
      9 <130> FILE REFERENCE: 2119-4293
     11 <140> CURRENT APPLICATION NUMBER: 10/069,427A
C--> 12 <141> CURRENT FILING DATE: 2002-02-19
     14 <150> PRIOR APPLICATION NUMBER: 60/156,820
     15 <151> PRIOR FILING DATE: 1999-09-30
     17 <160> NUMBER OF SEQ ID NOS: 10
     19 <170> SOFTWARE: Microsoft Office 95
     21 <210> SEQ ID NO: 1
     22 <211> LENGTH: 427
     23 <212> TYPE: DNA
     24 <213> ORGANISM: Glycine max
     26 <220> FEATURE:
     27 <221> NAME/KEY: unsure
     28 <222> LOCATION: (360)
     29 <223> OTHER INFORMATION: n=a,c,g or t
     31 <400> SEQUENCE: 1
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     33 aactccgttc ctttgcttgt ggggttcttc acttacttgg ccgttgctgg atccattctc 120
     34 cctggaaaac ttgttcctgg cgttgcacta ctcgatggaa ctcgtctaca ctattgctgc 180
     35 aatggtctgc tctcgcttct tctgttggtt gcacttctcg ggatcggtgc caagatgggt 240
     36 tttgtgtctc ccactgccat atcaaacaga ggacttgagc tgctgtccac aacttttgcc 300
W--> 37 ttcagttttc ttgtaaccct gatattgcat ttttccgggt gcaagtcaca aagtaaaggn 360
     38 tcatcactaa agcctcatct cagtgggaac ctgatacacg attggtggtt tgggaataca 420
     39 actaaaa                                                        427
     42 <210> SEQ ID NO: 2
     43 <211> LENGTH: 126
     44 <212> TYPE: PRT
     45 <213> ORGANISM: Glycine max
     47 <400> SEQUENCE: 2
     48 Leu Gln Ala Leu Thr Pro Ser Trp Asn Ser Val Pro Leu Leu Val Gly
     49   1               5                  10                  15
     51 Phe Phe Thr Tyr Leu Ala Val Ala Gly Ser Ile Leu Pro Gly Lys Leu
     52              20                  25                  30
     54 Val Pro Gly Val Ala Leu Leu Asp Gly Thr Arg Leu His Tyr Cys Cys
     55          35                  40                  45
     57 Asn Gly Leu Leu Ser Leu Leu Leu Leu Val Ala Leu Leu Gly Ile Gly
     58      50                  55                  60
     60 Ala Lys Met Gly Phe Val Ser Pro Thr Ala Ile Ser Asn Arg Gly Leu
     61  65                  70                  75                  80
     63 Glu Leu Leu Ser Thr Thr Phe Ala Phe Ser Phe Leu Val Thr Leu Ile
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Input Set : A:\Sequence Listing US10069427.txt
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64                  85                  90                  95
66 Leu His Phe Ser Gly Cys Lys Ser Gln Ser Lys Gly Ser Ser Leu Lys
67             100                 105                 110
69 Pro His Leu Ser Gly Asn Leu Ile His Asp Trp Trp Phe Gly
70         115                 120                 125
73 <210> SEQ ID NO: 3
74 <211> LENGTH: 667
75 <212> TYPE: DNA
76 <213> ORGANISM: Zea mays
78 <400> SEQUENCE: 3
79 ccacgcgtcc ggaagaacaa agtagagctg tccctttgt ctggtctagc taacttatgc  60
80 atctttctta ttggctacct agtgttccga ggagctaaca agcaaaaaca tgtgttcaag 120
81 aaggacccca aagctcctat atggggaaaa cctcccaaag ttgtcggggg aaagctacta 180
82 gcatctggtt actggggcat cgcaaggcac tgcaattatc tcggagacct gctgctagca 240
83 ctttcgttca gcttgccctg tggagtgagt tccgtggtcc catacttcta ccccacgtac 300
84 ctgctcattc tactggtctt gagggaaagg cgcgatgagg cgaggtgctc gcagaagtac 360
85 agggagatct gggcagagta ctgcaagctc gtgccgtgga ggatcctgcc ttatgtgtac 420
86 tgaagagacg gtagaaacca aggcagctca tggccctggg ccagctgtaa accttatttt 480
87 gtttgccctt aaccagttgg tgaatgttga tgtagcactc ggtaaactgt gaccgtgcaa 540
88 acttttgtta ttgttggtcc atacatgttt ggaatcgtga atcagaccgc ctcacttggt 600
89 ggcaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 660
90 aaaaaag                                                          667
93 <210> SEQ ID NO: 4
94 <211> LENGTH: 140
95 <212> TYPE: PRT
96 <213> ORGANISM: Zea mays
98 <400> SEQUENCE: 4
99 Pro Arg Val Arg Lys Asn Lys Val Glu Leu Ser Leu Leu Ser Gly Leu
100   1               5                  10                  15
102 Ala Asn Leu Cys Ile Phe Leu Ile Gly Tyr Leu Val Phe Arg Gly Ala
103              20                  25                  30
105 Asn Lys Gln Lys His Val Phe Lys Lys Asp Pro Lys Ala Pro Ile Trp
106          35                  40                  45
108 Gly Lys Pro Pro Lys Val Val Gly Gly Lys Leu Leu Ala Ser Gly Tyr
109      50                  55                  60
111 Trp Gly Ile Ala Arg His Cys Asn Tyr Leu Gly Asp Leu Leu Leu Ala
112  65                  70                  75                  80
114 Leu Ser Phe Ser Leu Pro Cys Gly Val Ser Ser Val Val Pro Tyr Phe
115                 85                  90                  95
117 Tyr Pro Thr Tyr Leu Leu Ile Leu Leu Val Leu Arg Glu Arg Arg Asp
118             100                 105                 110
120 Glu Ala Arg Cys Ser Gln Lys Tyr Arg Glu Ile Trp Ala Glu Tyr Cys
121         115                 120                 125
123 Lys Leu Val Pro Trp Arg Ile Leu Pro Tyr Val Tyr
124     130                 135                 140
126 <210> SEQ ID NO: 5
127 <211> LENGTH: 1631
128 <212> TYPE: DNA
129 <213> ORGANISM: Glycine max
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RAW SEQUENCE LISTING DATE: 02/01/2005
PATENT APPLICATION: **US/10/069,427A** TIME: 11:33:38

Input Set : **A:\Sequence Listing US10069427.txt**
Output Set: **N:\CRF4\02012005\J069427A.raw**

<400> SEQUENCE: 5
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tccatcttgg aactccgttc ctttgcttgt ggggttcttc acttacttgg ccgttgctgg 180
atccattctc cctggaaaac ttgttcctgg cgttgcacta ctcgatggaa ctcgtctaca 240
ctattgctgc aatggtctgc tctcgcttct tctgttggtt gcacttctcg ggatcggtgc 300
caagatgggt tttgtgtctc ccactgccat atcagacaga ggacttgagc tgctgtccac 360
aacttttgcc ttcagttttc ttgtaaccct gatattgcat ttttccggtt gcaagtcaca 420
aagtaaaggt tcatcactaa agcctcatct cagtggaaac ctgatacacg attggtggtt 480
tggtatacaa ctaaatccac agttcatggg tatcgacctc aaatttttct ttgttagagc 540
tggaatgatg ggatggctac ttatcaattt atctattctt atgaagagca ttcaagatgg 600
tactttgagc cagtcaatga ttctctacca gctattctgt gcactataca tcctggacta 660
ttttgtacat gaagagtaca tgacatccac ctgggacata attgcagaga gactgggctt 720
catgttggtc tttggagatt tagtgtggat tcctttctct ttcagcatac agggatggtg 780
gctcttgatg aacagtgtgg agttaacacc agctgccatt gtagctaatt gctttgtgtt 840
cctgattgga tacatggtat ttcgaggagc aaacaagcaa aagcatgtgt tcaaaaagaa 900
tccaaaggct cctatctggg gtaagcctcc aaaagtcatt ggtggaaagc tacttgcttc 960
tggttattgg ggtattgcta gacactgtaa ttacctaggg gatttgatgc ttgctctctc 1020
ctttagctta ccatgtggga taagttcacc aattccatac ttctatccaa tttatcttct 1080
tattctgtta atctggagag agagaaggga tgaagctcgt tgcgccgaga agtatagaga 1140
gatatgggcc gagtatcgta aacttgttcc atggagaata ttgccttacg tttattagga 1200
tgaaaaaaaa aagggcttca ccatgaattc ttcatcttgc cgatgttatt aagcacttcg 1260
atgtaaattg gttcttgttc ttgtggtttc aatcttggat cttttcttat tgagccatgt 1320
agctgcagga gagtgtttcg agggatttat cttaccatct atatttgtgt atcattatgc 1380
tgcagcctgc aggccttcat ttttcaatgg ccaactcttt ttgacttgtt ctatttgttt 1440
ttagatgaga atttcatggt caaagctcct aggcttaaaa aaacagtgtc atgttctatg 1500
ggaagtgcag gaagcaattc ggggactgca ggaagcaatt gcctttacat tgatatgctc 1560
aatggtactt taggcccttt aatgttcttg cttttcattt gtgagttatt attggcccca 1620
tttcatttgc a 1631
<210> SEQ ID NO: 6
<211> LENGTH: 374
<212> TYPE: PRT
<213> ORGANISM: Glycine max
<400> SEQUENCE: 6
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1 5 10 15
Pro Ser Trp Asn Ser Val Pro Leu Leu Val Gly Phe Phe Thr Tyr Leu
20 25 30
Ala Val Ala Gly Ser Ile Leu Pro Gly Lys Leu Val Pro Gly Val Ala
35 40 45
Leu Leu Asp Gly Thr Arg Leu His Tyr Cys Cys Asn Gly Leu Leu Ser
50 55 60
Leu Leu Leu Leu Val Ala Leu Leu Gly Ile Gly Ala Lys Met Gly Phe
65 70 75 80
Val Ser Pro Thr Ala Ile Ser Asp Arg Gly Leu Glu Leu Leu Ser Thr
85 90 95
Thr Phe Ala Phe Ser Phe Leu Val Thr Leu Ile Leu His Phe Ser Gly
100 105 110
Cys Lys Ser Gln Ser Lys Gly Ser Ser Leu Lys Pro His Leu Ser Gly

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PATENT APPLICATION: US/10/069,427A TIME: 11:33:38

Input Set : A:\Sequence Listing US10069427.txt
Output Set: N:\CRF4\02012005\J069427A.raw

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190         115                 120                 125
192 Asn Leu Ile His Asp Trp Trp Phe Gly Ile Gln Leu Asn Pro Gln Phe
193     130                 135                 140
195 Met Gly Ile Asp Leu Lys Phe Phe Phe Val Arg Ala Gly Met Met Gly
196 145                 150                 155                 160
198 Trp Leu Leu Ile Asn Leu Ser Ile Leu Met Lys Ser Ile Gln Asp Gly
199                 165                 170                 175
201 Thr Leu Ser Gln Ser Met Ile Leu Tyr Gln Leu Phe Cys Ala Leu Tyr
202             180                 185                 190
204 Ile Leu Asp Tyr Phe Val His Glu Glu Tyr Met Thr Ser Thr Trp Asp
205         195                 200                 205
207 Ile Ile Ala Glu Arg Leu Gly Phe Met Leu Val Phe Gly Asp Leu Val
208     210                 215                 220
210 Trp Ile Pro Phe Ser Phe Ser Ile Gln Gly Trp Trp Leu Leu Met Asn
211 225                 230                 235                 240
213 Ser Val Glu Leu Thr Pro Ala Ala Ile Val Ala Asn Cys Phe Val Phe
214                 245                 250                 255
216 Leu Ile Gly Tyr Met Val Phe Arg Gly Ala Asn Lys Gln Lys His Val
217             260                 265                 270
219 Phe Lys Lys Asn Pro Lys Ala Pro Ile Trp Gly Lys Pro Pro Lys Val
220         275                 280                 285
222 Ile Gly Gly Lys Leu Leu Ala Ser Gly Tyr Trp Gly Ile Ala Arg His
223     290                 295                 300
225 Cys Asn Tyr Leu Gly Asp Leu Met Leu Ala Leu Ser Phe Ser Leu Pro
226 305                 310                 315                 320
228 Cys Gly Ile Ser Ser Pro Ile Pro Tyr Phe Tyr Pro Ile Tyr Leu Leu
229                 325                 330                 335
231 Ile Leu Leu Ile Trp Arg Glu Arg Arg Asp Glu Ala Arg Cys Ala Glu
232             340                 345                 350
234 Lys Tyr Arg Glu Ile Trp Ala Glu Tyr Arg Lys Leu Val Pro Trp Arg
235         355                 360                 365
237 Ile Leu Pro Tyr Val Tyr
238     370
243 <210> SEQ ID NO: 7
244 <211> LENGTH: 1364
245 <212> TYPE: DNA
246 <213> ORGANISM: Glycine max
248 <400> SEQUENCE: 7
249 ttcggcacga gtaaaacctc aatcttttac tgaaaagtct caactttgaa ctcactcgaa   60
250 gtgatgatgg agtcacacgt ggatctaggt tttctccttc aagctctcac tccatcttgg  120
251 aactccgttc ctttgcttgt ggggttcttc acttacttgg ccgttgctgg atccattctc  180
252 cctggaaaac ttgttcctgg cgttgcacta ctcgatggaa ctcgtctaca ctattgctgc  240
253 aatggtctgc tctcgcttct tctgttggtt gcacttctcg ggatcggtgc caagatgggt  300
254 tttgtgtctc ccactgccat atcagacaga ggacttgagc tgctgtccac aacttttgcc  360
255 ttcagtttc ttgtaaccct gatattgcat ttttccggtt gcaagtcaca aagtaaaggt  420
256 tcatcactaa agcctcatct cagtggaaac ctgatacacg attggtggtt tggtatacaa  480
257 ctaaatccac agttcatggg tatcgacctc aaagctggaa tgatgggatg gctacttatc  540
258 aatttatcta ttcttatgaa gagcattcaa gatggtactt tgagccagtc aatgattctc  600
259 taccagctat tctgtgcact atacatcctg gactattttg tacatgaaga gtacatgaca  660
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RAW SEQUENCE LISTING DATE: 02/01/2005
PATENT APPLICATION: US/10/069,427A TIME: 11:33:38

Input Set : A:\Sequence Listing US10069427.txt
Output Set: N:\CRF4\02012005\J069427A.raw

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260 tccacctggg acataattgc agagagactg ggcttcatgt tggtctttgg agatttagtg  720
261 tggattcctt tctctttcag catacaggga tggtggctct tgatgaacag tgtggagtta  780
262 acaccagctg ccattgtagc taattgcttt gtgttcctga ttggatacat ggtatttcga  840
263 ggagcaaaca agcaaaagca tgtgttcaaa aagaatccaa aggctcctat ctggggtaag  900
264 cctccaaaag tcattggtgg aaagctactt gcttctggtt attggggtat tgctagacac  960
265 tgtaattacc taggggattt gatgcttgct ctctccttta gcttaccatg tgggataagt 1020
266 tcaccaattc catacttcta tccaatttat cttcttattc tgttaatctg gagagagaga 1080
267 acggatgaag ctcgttgcgc cgagaagtat agagagatat gggccgagta tcgtaaactt 1140
268 gttccatgga gaatattgcc ttacgtttat taggatgaaa aaaaaaaggg cttcaccatg 1200
269 aattcttcat cttgccgatg ttattaagca cttcgatgta aattggttct tgttcttgtg 1260
270 gtttcaatct tggatctttt cttattgagc catgtagctg caggagagtg tttcgaggga 1320
271 tttatcttac catctatatt tgtgtaaaaa aaaaaaaaaa aaaa                  1364
274 <210> SEQ ID NO: 8
275 <211> LENGTH: 369
276 <212> TYPE: PRT
277 <213> ORGANISM: Glycine max
279 <400> SEQUENCE: 8
280 Met Met Glu Ser His Val Asp Leu Gly Phe Leu Leu Gln Ala Leu Thr
281   1               5                  10                  15
283 Pro Ser Trp Asn Ser Val Pro Leu Leu Val Gly Phe Phe Thr Tyr Leu
284              20                  25                  30
286 Ala Val Ala Gly Ser Ile Leu Pro Gly Lys Leu Val Pro Gly Val Ala
287          35                  40                  45
289 Leu Leu Asp Gly Thr Arg Leu His Tyr Cys Cys Asn Gly Leu Leu Ser
290      50                  55                  60
292 Leu Leu Leu Leu Val Ala Leu Leu Gly Ile Gly Ala Lys Met Gly Phe
293  65                  70                  75                  80
295 Val Ser Pro Thr Ala Ile Ser Asp Arg Gly Leu Glu Leu Leu Ser Thr
296                  85                  90                  95
298 Thr Phe Ala Phe Ser Phe Leu Val Thr Leu Ile Leu His Phe Ser Gly
299             100                 105                 110
301 Cys Lys Ser Gln Ser Lys Gly Ser Ser Leu Lys Pro His Leu Ser Gly
302         115                 120                 125
304 Asn Leu Ile His Asp Trp Trp Phe Gly Ile Gln Leu Asn Pro Gln Phe
305     130                 135                 140
307 Met Gly Ile Asp Leu Lys Ala Gly Met Met Gly Trp Leu Leu Ile Asn
308 145                 150                 155                 160
310 Leu Ser Ile Leu Met Lys Ser Ile Gln Asp Gly Thr Leu Ser Gln Ser
311                 165                 170                 175
313 Met Ile Leu Tyr Gln Leu Phe Cys Ala Leu Tyr Ile Leu Asp Tyr Phe
314             180                 185                 190
316 Val His Glu Glu Tyr Met Thr Ser Thr Trp Asp Ile Ile Ala Glu Arg
317         195                 200                 205
319 Leu Gly Phe Met Leu Val Phe Gly Asp Leu Val Trp Ile Pro Phe Ser
320     210                 215                 220
322 Phe Ser Ile Gln Gly Trp Trp Leu Leu Met Asn Ser Val Glu Leu Thr
323 225                 230                 235                 240
325 Pro Ala Ala Ile Val Ala Asn Cys Phe Val Phe Leu Ile Gly Tyr Met
326                 245                 250                 255
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RAW SEQUENCE LISTING ERROR SUMMARY DATE: 02/01/2005
PATENT APPLICATION: US/10/069,427A TIME: 11:33:39

Input Set : A:\Sequence Listing US10069427.txt
Output Set: N:\CRF4\02012005\J069427A.raw

Please Note:
Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:1; N Pos. 360

VERIFICATION SUMMARY DATE: 02/01/2005
PATENT APPLICATION: **US/10/069,427A** TIME: 11:33:39

Input Set : **A:\Sequence Listing US10069427.txt**
Output Set: **N:\CRF4\02012005\J069427A.raw**

L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:37 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:300